REMARKS

Claims 1-3 and 6 remain pending in this application, Claims 4 and 5 having been cancelled by the foregoing amendment, and Claim 6 having been added.

Claims 1-5 have been rejected under 35 U.S.C. §103(a) as unpatentable over Odom et al (Cisco, "VoIP Call Admission Control", August 2001) in view of Hosien et al (U.S. Patent No. 6,363,052). However, for the reasons set forth hereinafter, Applicants respectfully submit that all claims which remain of record in this application distinguish over the cited references, whether considered separately or combined with each other.

The present invention is directed to a method of call admission control for continuous streams of data in packet switched networks (such as voice over IP), which include at least two local area networks that communicate with each other across a connecting method. In such networks, over which continuous data streams are transmitted, especially voice communication, methods which are used for other types of data transmission, such as queuing, buffering and packet drop decisions are not acceptable. Rather, as noted in the Odom et al. reference, it is preferable to deny network access, rather than to allow the quality of the signal to be degraded by packet loss or queuing, etc.

Accordingly, the present invention provides a method of call admission, in which packet loss rates are determined, either for previous calls, or currently for communications between nodes in the respective networks, and a call attempt is dropped if the packet loss rate is such that the quality of the call may be degraded, or would degrade the quality of calls already in progress due to the generation of further congestion.

According to one feature of the invention, the determination of a current packet loss rate for calls from the first local area network to the second local area network is determined by transmitting a burst of trial data from a first node in the first local area network, through the connecting network to a second node in the second local area network. The burst of trial data received at the second node is then reflected back to the first node via the connecting network, and compared with the transmitted burst of trial data to determine a packet loss rate. In particular, as recited in Claims 2 and 6, the burst of trial data that is used for this purpose comprises a plurality of packets having a size and priority that corresponds to packets that are to be sent if the call is completed.

As noted in item 4 of the Office Action, the Odom et al. reference (Cisco, "VoIP Call Admission Control") discloses a method for call admission control for a continuous stream of data in packet switched networks, including at least two local area networks that communicate with one another across a connecting network. Applicants agree with the Examiner's characterization in this regard.

On the other hand, the Hosein reference discloses a congestion control arrangement for use in network systems.

With regard to Claim 1 in particular, the Office Action states that Hosien et al. discloses that call admission control comprises the steps of determining a success rate of previous calls from a first switch to a second switch in deciding to drop the call attempt, based on the success rates of the previous calls. In this regard, however, Applicants note that, as far as can be determined from the specification in Hosein, it does not disclose a packet switched network system. Indeed, the word "packet" and other words that are characteristically used in connection with packet switched systems are altogether absent in Hosein. In particular, Hosein contains no disclosure which teaches or suggests that the system determines "a packet loss rate of previous calls from a first local area network to a second local area network" or that it decides to drop a call attempt "based on the packet loss rate of previous calls". The Office Action acknowledges in this regard that Odom et al. also does not disclose that call admission control is performed based on a determination of success rates of previous calls. Accordingly, the combination of Odom et al. and Hosein does not replicate the present invention. In addition, Applicants also note that the Hosein patent is based on the concept that congested switches within the network detect the congestion and take action based on the condition of their links. This technique differs significantly in this regard from the Odom et al system, which utilizes

Service Assurance Agent (SAA) probes to gauge the degree of congestion within a network, and makes a decision based on the loss and delay characteristics of the network as determined by the probe as it traverses the network. Accordingly, it is not clear whether or how the Hosein reference could be combined with the overall system provided in Odom et al.

With regard to Claims 2 and 6, Applicants respectfully submit that the Odom et al. system does not teach or suggest the transmission of a burst of trial data ("probe") that comprises "a plurality of data packets having a size and priority that corresponds to packets that are to be sent if the call is completed" as recited in both of the latter claims. That is, in the invention as defined in both Claims 2 and 6, the probe mimics the packets which are to be sent for a specific call over a period of time (hence the term "trial data"). (See specification at page 7, lines 27-29.) Rather, in the Odom et al. system, the "SAA packets can be built and customized to mimic the type of traffic for which they are measuring the network – in this case a voice packet". In other words, the probe in Odom et al. simply replicates the characteristics of a particular type of transmission, not the specific call for which admission to the network is sought, as recited in both Claims 2 and 6. Accordingly, Applicants respectfully submit that Claims 2 and 6 distinguish over the combination of Odom et al. and Hosein for this additional reason as well.

In light of the foregoing remarks, this application should be in consideration for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #038665.56183US).

Respectfully submitted,

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